

SEQUENCE LISTING

<110> ABURATANI, Hiroyuki
MIDORIKAWA, Yutaka
NAKANO, Kiyotaka
OHIZUMI, Iwao
ITO, Yukio
TOKITA, Susumu

<120> ANTIBODY AGAINST SOLUBLE N-TERMINAL PEPTIDE OR C-TERMINAL PEPTIDE OF GPC3
PRESENT IN BLOOD

<140> PCT/JP03/11318
<141> 2003-09-04

<150> PCT/JP02/08999
<151> 2002-09-04

<160> 24

<170> PatentIn Ver. 2.1

<210> 1
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<223> Description of Artificial Sequence: Synthetic DNA

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<220>
<223> Description of Artificial Sequence: Synthetic DNA

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<213> Homo sapiens

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<221> CDS
<222> (109)..(1851)

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Met Ala Gly
1
acc gtg cgc acc gcg tgc ttg gtg gtg gcg atg ctg ctc agc ttg gac 165
Thr Val Arg Thr Ala Cys Leu Val Val Ala Met Leu Leu Ser Leu Asp
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ttc ccg gga cag gcg cag ccc ccg ccg ccg ccg ccg gac gcc acc tgt 213
Phe Pro Gly Gln Ala Gln Pro Pro Pro Pro Pro Asp Ala Thr Cys
20 25 30 35

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gtg Val	cca Pro	gaa Glu	act Thr 55	ccc Pro	gtg Val	cca Pro	gga Gly	tca Ser 60	gat Asp	ttg Leu	caa Gln	gta Val	tgt Cys 65	ctc Leu	cct Pro	309
aag Lys	ggc Gly	cca Pro 70	aca Thr	tgc Cys	tgc Cys	tca Ser	aga Arg 75	aag Lys	atg Met	gaa Glu	gaa Glu	aaa Lys 80	tac Tyr	caa Gln	cta Leu	357
aca Thr	gca Ala 85	cga Arg	ttg Leu	aac Asn	atg Met	gaa Glu 90	cag Gln	ctg Leu	ctt Leu	cag Gln	tct Ser 95	gca Ala	agt Ser	atg Met	gag Glu	405
ctc Leu 100	aag Lys	ttc Phe	tta Leu	att Ile 105	att Ile	cag Gln	aat Asn	gct Ala	gcg Ala	gtt Val 110	ttc Phe	caa Gln	gag Glu	gcc Ala	ttt Phe 115	453
gaa Glu	att Ile	gtt Val	gtt Val	cgc Arg 120	cat His	gcc Ala	aag Lys	aac Asn	tac Tyr 125	acc Thr	aat Asn	gcc Ala	atg Met	ttc Phe 130	aag Lys	501
aac Asn	aac Asn	tac Tyr	cca Pro 135	agc Ser	ctg Leu	act Thr	cca Pro	caa Gln 140	gct Ala	ttt Phe	gag Glu	ttt Phe	gtg Val 145	ggg Gly	gaa Glu	549
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ccc Pro	aag Lys	ctt Leu 215	att Ile	atg Met	acc Thr	cag Gln	gtt Val 220	tcc Ser 220	aag Lys	tca Ser	ctg Leu	caa Gln	gtc Val 225	act Thr	agg Arg	789
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caa Gln	tat Tyr	aga Arg	tct Ser	gct Ala 360	tat Tyr	tat Tyr	cct Pro	gaa Glu	gat Asp 365	ctc Leu	ttt Phe	att Ile	gac Asp	aag Lys 370	aaa Lys	1221
gta	tta	aaa	gtt	gct	cat	gta	gaa	cat	gaa	gaa	acc	tta	tcc	agc	cga	1269

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	Ser	Met	Glu	Leu	85	Phe	Leu	Ile	Ile	90	Gln	Asn	Ala	Ala	Val	95	Phe	Gln	
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	Val	Ile	Tyr	Thr	165	Gln	Leu	Met	Asn	170	Gly	Leu	Pro	Asp	Ser	175	Ala	Leu	
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	Gly	Asn	Phe	Pro	195	Lys	Leu	Ile	Met	200	Thr	Gln	Val	Ser	Lys	205	Ser	Leu	Gln
	Val	Thr	Arg	Ile	210	Phe	Leu	Gln	Ala	215	Leu	Asn	Leu	Gly	Ile	220	Glu	Val	Ile
	225	Asn	Thr	Thr	230	His	Leu	Lys	Phe	235	Ser	Lys	Asp	Cys	Gly	240	Arg	Met	Leu
	Thr	Arg	Met	Trp	245	Tyr	Cys	Ser	Tyr	250	Cys	Gln	Gly	Leu	Met	255	Met	Val	Lys
	Pro	Cys	Gly	Gly	260	Tyr	Cys	Asn	Val	265	Val	Met	Gln	Gly	Cys	270	Met	Ala	Gly
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	Ser	Ser	Arg	Arg	370	Arg	Glu	Leu	Ile	375	Gln	Lys	Leu	Lys	Ser	380	Phe	Ile	Ser
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	Lys	Leu	Lys	His	450	Ile	Asn	Gln	Leu	455	Leu	Leu	Arg	Thr	Met	460	Ser	Met	Pro
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	Lys	Asp	Asn	Glu	530	Ile	Ser	Thr	Phe	535	His	Asn	Leu	Gly	Asn	540	Val	His	Ser
	545	Pro	Leu	Lys	550	Leu	Thr	Ser	Met	555	Ala	Ile	Ser	Val	Val	560	Cys	Phe	Phe
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 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Synthetic DNA

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 <210> 6
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 <212> DNA
 <213> Artificial Sequence

 <220>
 <223> Description of Artificial Sequence: Synthetic DNA

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 <212> DNA
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 <220>
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 <223> Description of Artificial Sequence: Synthetic DNA

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 <222> (1)..(1389)

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 <223> Description of Artificial Sequence: Mouse-human
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 gtc cag tgt gag gtg caa ctg gtg gag tct ggg gga ggc tta gtg aag 96
 Page 5

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cct	gga	gga	tcc	ctg	aaa	ctc	tcc	tgt	gca	gcc	tct	gga	ttc	act	ttc	144
Pro	Gly	Gly	Ser	Leu	Lys	Leu	Ser	Cys	Ala	Ala	Ser	Gly	Phe	Thr	Phe	
		35					40					45				
agt	cgc	tat	gcc	atg	tct	tgg	gtt	cgc	cag	att	cca	gag	aag	ata	ctg	192
Ser	Arg	Tyr	Ala	Met	Ser	Trp	Val	Arg	Gln	Ile	Pro	Glu	Lys	Ile	Leu	
	50					55					60					
gag	tgg	gtc	gca	gcc	att	gat	agt	agt	ggt	ggt	gac	acc	tac	tat	tta	240
Glu	Trp	Val	Ala	Ala	Ile	Asp	Ser	Ser	Gly	Gly	Asp	Thr	Tyr	Tyr	Leu	
	65				70				75						80	
gac	act	gtg	aag	gac	cga	ttc	acc	atc	tcc	aga	gac	aat	gcc	aat	aat	288
Asp	Thr	Val	Lys	Asp	Arg	Phe	Thr	Ile	Ser	Arg	Asp	Asn	Ala	Asn	Asn	
			85						90				95			
acc	ctg	cac	ctg	caa	atg	cgc	agt	ctg	agg	tct	gag	gac	aca	gcc	ttg	336
Thr	Leu	His	Leu	Gln	Met	Arg	Ser	Leu	Arg	Ser	Glu	Asp	Thr	Ala	Leu	
			100					105					110			
tat	tac	tgt	gta	aga	cag	ggg	ggg	gct	tac	tgg	ggc	caa	ggg	act	ctg	384
Tyr	Tyr	Cys	Val	Arg	Gln	Gly	Gly	Ala	Tyr	Trp	Gly	Gln	Gly	Thr	Leu	
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gtc	act	gtc	tct	gca	gct	agc	acc	aag	ggc	cca	tcg	gtc	ttc	ccc	ctg	432
Val	Thr	Val	Ser	Ala	Ala	Ser	Thr	Lys	Gly	Pro	Ser	Val	Phe	Pro	Leu	
	130					135					140					
gca	ccc	tcc	tcc	aag	agc	acc	tct	ggg	ggc	aca	gcg	gcc	ctg	ggc	tgc	480
Ala	Pro	Ser	Ser	Lys	Ser	Thr	Ser	Gly	Gly	Thr	Ala	Ala	Leu	Gly	Cys	
	145			150				155						160		
ctg	gtc	aag	gac	tac	ttc	ccc	gaa	ccg	gtg	acg	gtg	tcg	tgg	aac	tca	528
Leu	Val	Lys	Asp	Tyr	Phe	Pro	Glu	Pro	Val	Thr	Val	Ser	Trp	Asn	Ser	
			165					170					175			
ggc	gcc	ctg	acc	agc	ggc	gtg	cac	acc	ttc	ccg	gct	gtc	cta	cag	tcc	576
Gly	Ala	Leu	Thr	Ser	Gly	Val	His	Thr	Phe	Pro	Ala	Val	Leu	Gln	Ser	
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Ser	Gly	Leu	Tyr	Ser	Leu	Ser	Ser	Val	Val	Thr	Val	Pro	Ser	Ser	Ser	
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Thr	Lys	Val	Asp	Lys	Lys	Val	Glu	Pro	Lys	Ser	Cys	Asp	Lys	Thr	His	
	225			230					235					240		
aca	tgc	cca	ccg	tgc	cca	gca	cct	gaa	ctc	ctg	ggg	gga	ccg	tca	gtc	768
Thr	Cys	Pro	Pro	Cys	Pro	Ala	Pro	Glu	Leu	Leu	Gly	Gly	Pro	Ser	Val	
			245					250					255			
ttc	ctc	ttc	ccc	cca	aaa	ccc	aag	gac	acc	ctc	atg	atc	tcc	cgg	acc	816
Phe	Leu	Phe	Pro	Pro	Lys	Pro	Lys	Asp	Thr	Leu	Met	Ile	Ser	Arg	Thr	
			260					265					270			
cct	gag	gtc	aca	tgc	gtg	gtg	gtg	gac	gtg	agc	cac	gaa	gac	cct	gag	864
Pro	Glu	Val	Thr	Cys	Val	Val	Val	Asp	Val	Ser	His	Glu	Asp	Pro	Glu	
	275				280							285				
gtc	aag	ttc	aac	tgg	tac	gtg	gac	ggc	gtg	gag	gtg	cat	aat	gcc	aag	912
Val	Lys	Phe	Asn	Trp	Tyr	Val	Asp	Gly	Val	Glu	Val	His	Asn	Ala	Lys	
	290				295					300						
aca	aag	ccg	cgg	gag	gag	cag	tac	aac	agc	acg	tac	cgt	gtg	gtc	agc	960
Thr	Lys	Pro	Arg	Glu	Glu	Gln	Tyr	Asn	Ser	Thr	Tyr	Arg	Val	Val	Ser	
	305			310				315						320		
gtc	ctc	acc	gtc	ctg	cac	cag	gac	tgg	ctg	aat	ggc	aag	gag	tac	aag	1008
Val	Leu	Thr	Val	Leu	His	Gln	Asp	Trp	Leu	Asn	Gly	Lys	Glu	Tyr	Lys	
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tgc	aag	gtc	tcc	aac	aaa	gcc	ctc	cca	gcc	ccc	atc	gag	aaa	acc	atc	1056
Cys	Lys	Val	Ser	Asn	Lys	Ala	Leu	Pro	Ala	Pro	Ile	Glu	Lys	Thr	Ile	
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cca	tcc	355	gat	gag	ctg	acc	360	aag	aac	cag	gtc	agc	365	ctg	acc	tgc	ctg	1152
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gtc	aaa	ggc	ttc	tat	ccc	agc	gac	atc	gcc	gtg	gag	tgg	gag	agc	aat			1200
Val	Lys	Gly	Phe	Tyr	Pro	Ser	Asp	Ile	Ala	Val	Glu	Trp	Glu	Ser	Asn			
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Gly	Gln	Pro	Glu	Asn	Asn	Tyr	Lys	Thr	Thr	Pro	Pro	Val	Leu	Asp	Ser			
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gac	ggc	tcc	ttc	ctc	tac	agc	aag	ctc	acc	gtg	gac	aag	agc	agg				1296
Asp	Gly	Ser	Phe	Phe	Leu	Tyr	Ser	Lys	Leu	Thr	Val	Asp	Lys	Ser	Arg			
			420					425				430						
tgg	cag	cag	ggg	aac	gtc	ttc	tca	tgc	tcc	gtg	atg	cat	gag	gct	ctg			1344
Trp	Gln	Gln	Gly	Asn	Val	Phe	Ser	Cys	Ser	Val	Met	His	Glu	Ala	Leu			
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cac	aac	cac	tac	acg	cag	aag	agc	ctc	tcc	ctg	tct	ccg	ggt	aaa	tga			1392
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<211> 463

<212> PRT

<213> Artificial Sequence

<223> Description of Artificial Sequence: Mouse-human
chimeric antibody (M3C11 H chain)

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Pro	Gly	Gly	Ser	Leu	Lys	Leu	Ser	Cys	Ala	Ala	Ser	Gly	Phe	Thr	Phe			
		35					40					45						
Ser	Arg	Tyr	Ala	Met	Ser	Trp	Val	Arg	Gln	Ile	Pro	Glu	Lys	Ile	Leu			
	50					55					60							
Glu	Trp	Val	Ala	Ala	Ile	Asp	Ser	Ser	Gly	Gly	Asp	Thr	Tyr	Tyr	Leu			
	65				70				75					80				
Asp	Thr	Val	Lys	Asp	Arg	Phe	Thr	Ile	Ser	Arg	Asp	Asn	Ala	Asn	Asn			
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Thr	Leu	His	Leu	Gln	Met	Arg	Ser	Leu	Arg	Ser	Glu	Asp	Thr	Ala	Leu			
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Tyr	Tyr	Cys	Val	Arg	Gln	Gly	Gly	Ala	Tyr	Trp	Gly	Gln	Gly	Thr	Leu			
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Ser	Gly	Leu	Tyr	Ser	Leu	Ser	Ser	Val	Val	Thr	Val	Pro	Ser	Ser	Ser			
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Phe	Leu	Phe	Pro	Pro	Lys	Pro	Lys	Asp	Thr	Leu	Met	Ile	Ser	Arg	Thr			
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Pro	Glu	Val	Thr	Cys	Val	Val	Val	Asp	Val	Ser	His	Glu	Asp	Pro	Glu			

Val	Lys	275	Phe	Asn	Trp	Tyr	Val	280	Asp	Gly	Val	Glu	Val	285	His	Asn	Ala	Lys
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Cys	Lys	340	Ala	Lys	Gly	Gln	345	Pro	Arg	Glu	Pro	Gln	350	Val	Tyr	Thr	Leu	Pro
Ser	Lys	355	Arg	Asp	Glu	Leu	360	Lys	Asn	Gln	Val	Ser	365	Leu	Thr	Cys	Leu	
Pro	Ser	370	Lys	Gly	Phe	Tyr	375	Ser	Asp	Ile	Ala	Val	380	Glu	Trp	Glu	Ser	Asn
Val	Lys	385	Gln	Pro	Glu	Asn	390	Tyr	Lys	Thr	Thr	Pro	395	Pro	Val	Leu	Asp	Ser
Gly	Gln	405	Phe	Phe	Leu	Tyr	410	Ser	Lys	Leu	Thr	Val	415	Asp	Lys	Ser	Arg	
Asp	Gly	420	Gln	Gly	Asn	Val	425	Ser	Cys	Ser	Val	Met	430	His	Glu	Ala	Leu	
Trp	Gln	435	Tyr	Thr	Gln	Lys	440	Ser	Leu	Ser	Leu	Ser	445	Pro	Gly	Lys		
His	Asn	450					455						460					

<210> 11
 <211> 1413
 <212> DNA
 <213> Artificial Sequence

<220>
 <221> CDS
 <222> (1)..(1410)

<220>
 <223> Description of Artificial Sequence: Mouse-human
 chimeric antibody (M1E07 H chain)

<400> 11																			
atg	gga	tgg	aac	tgg	atc	ttt	att	tta	atc	ctg	tca	gta	act	aca	ggt	48			
Met	Gly	Trp	Asn	Trp	Ile	Phe	Ile	Leu	Ile	Leu	Ser	Val	Thr	Thr	Gly				
1				5				10				15							
gtc	cac	tct	gag	gtc	cag	ctg	cag	cag	tct	gga	cct	gag	ctg	gtg	aag	96			
Val	His	Ser	Glu	Val	Gln	Leu	Gln	Gln	Ser	Gly	Pro	Glu	Leu	Val	Lys				
			20				25					30							
cct	ggg	gct	tca	gtg	aag	ata	tcc	tgc	aag	gct	tct	ggt	tac	tca	ttc	144			
Pro	Gly	Ala	Ser	Val	Lys	Ile	Ser	Cys	Lys	Ala	Ser	Gly	Tyr	Ser	Phe				
			35				40					45							
act	ggc	tac	tac	atg	cac	tgg	gtg	aag	caa	agt	cct	gaa	aag	agc	ctt	192			
Thr	Gly	Tyr	Tyr	Met	His	Trp	Val	Lys	Gln	Ser	Pro	Glu	Lys	Ser	Leu				
			50			55					60								
gag	tgg	att	gga	gag	att	aat	cct	agc	act	ggt	ggt	act	acc	tac	aac	240			
Glu	Trp	Ile	Gly	Glu	Ile	Asn	Pro	Ser	Thr	Gly	Gly	Thr	Thr	Tyr	Asn				
			65		70					75					80				
cag	aag	ttc	aag	gcc	aag	gcc	aca	ttg	act	gta	gac	aaa	tcc	tcc	agc	288			
Gln	Lys	Phe	Lys	Ala	Lys	Ala	Thr	Leu	Thr	Val	Asp	Lys	Ser	Ser	Ser				
			85				90					95							
aca	gcc	tac	atg	cag	ctc	aag	agc	ctg	aca	tct	gag	gac	tct	gca	gtc	336			
Thr	Ala	Tyr	Met	Gln	Leu	Lys	Ser	Leu	Thr	Ser	Glu	Asp	Ser	Ala	Val				
			100				105					110							
tat	tac	tgt	gca	agg	agg	ggc	gga	tta	act	ggg	acg	agc	ttc	ttt	gct	384			
Tyr	Tyr	Cys	Ala	Arg	Arg	Gly	Gly	Leu	Thr	Gly	Thr	Ser	Phe	Phe	Ala				
			115			120						125							
tac	tgg	ggc	caa	ggg	act	ctg	gtc	act	gtc	tct	gca	gct	agc	acc	aag	432			
Tyr	Trp	Gly	Gln	Gly	Thr	Leu	Val	Thr	Val	Ser	Ala	Ala	Ser	Thr	Lys				

130	135	140	
ggc cca tcg gtc ttc ccc ctg gca ccc tcc tcc aag agc acc tct ggg 480	ctg gca ccc tcc tcc aag agc acc tct ggg 480		
Gly Pro Ser Val Phe Pro 150	Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly 160		
145	155		
ggc aca gcg gcc ctg ggc tgc ctg gtc aag gac tac ttc ccc gaa ccg 528	gca ccc tcc tcc aag gac tac ttc ccc gaa ccg 528		
Gly Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro 175	Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Val His Thr 190		
165	185		
gtg acg gtg tcg tgg aac tca ggc gcc ctg acc agc ggc gtg cac acc 576	gca ccc tcc tcc aag gac tac ttc ccc gaa ccg 528		
Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr 190	Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Val His Thr 190		
180	200		
ttc ccg gct gtc cta cag tcc tca gga ctc tac tcc ctc agc agc gtg 624	gca ccc tcc tcc aag gac tac ttc ccc gaa ccg 528		
Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val 205	Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Val His Thr 190		
195	220		
gtg acc gtg ccc tcc agc agc ttg ggc acc cag acc tac atc tgc aac 672	gca ccc tcc tcc aag gac tac ttc ccc gaa ccg 528		
Val Thr Val Pro Ser Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn 210	Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Val His Thr 190		
210	235		
gtg aat cac aag ccc agc aac acc aag gtg gac aag aaa gtt gag ccc 720	gca ccc tcc tcc aag gac tac ttc ccc gaa ccg 528		
Val Asn His Lys Pro Ser Asn Thr Lys Val Asp Lys Lys Val Glu Pro 240	Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Val His Thr 190		
225	255		
aaa tct tgt gac aaa act cac aca tgc cca ccg tgc cca gca cct gaa 768	gca ccc tcc tcc aag gac tac ttc ccc gaa ccg 528		
Lys Ser Cys Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu 255	Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Val His Thr 190		
245	280		
ctc ctg ggg gga ccg tca gtc ttc ctc ttc ccc cca aaa ccc aag gac 816	gca ccc tcc tcc aag gac tac ttc ccc gaa ccg 528		
Leu Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp 260	Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Val His Thr 190		
260	300		
acc ctc atg atc tcc cgg acc cct gag gtc aca tgc gtg gtg gtg gac 864	gca ccc tcc tcc aag gac tac ttc ccc gaa ccg 528		
Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp 275	Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Val His Thr 190		
275	325		
gtg agc cac gaa gac cct gag gtc aag ttc aac tgg tac gtg gac ggc 912	gca ccc tcc tcc aag gac tac ttc ccc gaa ccg 528		
Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly 290	Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Val His Thr 190		
290	350		
gtg gag gtg cat aat gcc aag aca aag ccg cgg gag gag cag tac aac 960	gca ccc tcc tcc aag gac tac ttc ccc gaa ccg 528		
Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn 305	Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Val His Thr 190		
305	375		
agc acg tac cgt gtg gtc agc gtc ctc acc gtc ctg cac cag gac tgg 1008	gca ccc tcc tcc aag gac tac ttc ccc gaa ccg 528		
Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp 325	Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Val His Thr 190		
325	410		
ctg aat ggc aag gag tac aag tgc aag gtc tcc aac aaa gcc ctc cca 1056	gca ccc tcc tcc aag gac tac ttc ccc gaa ccg 528		
Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro 340	Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Val His Thr 190		
340	445		
gcc ccc atc gag aaa acc atc tcc aaa gcc aaa ggg cag ccc cga gaa 1104	gca ccc tcc tcc aag gac tac ttc ccc gaa ccg 528		
Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu 355	Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Val His Thr 190		
355	460		
cca cag gtg tac acc ctg ccc cca tcc cgg gat gag ctg acc aag aac 1152	gca ccc tcc tcc aag gac tac ttc ccc gaa ccg 528		
Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn 370	Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Val His Thr 190		
370	465		
cag gtc agc ctg acc tgc ctg gtc aaa ggc ttc tat ccc agc gac atc 1200	gca ccc tcc tcc aag gac tac ttc ccc gaa ccg 528		
Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile 385	Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Val His Thr 190		
385	470		
gcc gtg gag tgg gag agc aat ggg cag ccg gag aac aac tac aag acc 1248	gca ccc tcc tcc aag gac tac ttc ccc gaa ccg 528		
Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr 405	Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Val His Thr 190		
405	475		
acg cct ccc gtg ctg gac tcc gac ggc tcc ttc ttc ctc tac agc aag 1296	gca ccc tcc tcc aag gac tac ttc ccc gaa ccg 528		
Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys 420	Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Val His Thr 190		
420	480		
ctc acc gtg gac aag agc agg tgg cag cag ggg aac gtc ttc tca tgc 1344	gca ccc tcc tcc aag gac tac ttc ccc gaa ccg 528		
Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys 435	Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Val His Thr 190		
435	485		
tcc gtg atg cat gag gct ctg cac aac cac tac acg cag aag agc ctc 1392	gca ccc tcc tcc aag gac tac ttc ccc gaa ccg 528		
Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu 450	Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Val His Thr 190		
450	490		
tcc ctg tct ccg ggt aaa tga 1413	gca ccc tcc tcc aag gac tac ttc ccc gaa ccg 528		
Ser Leu Ser Pro Gly Lys 465	Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly Val His Thr 190		
465	495		

<210> 12
 <211> 470
 <212> PRT
 <213> Artificial Sequence

<223> Description of Artificial Sequence: Mouse-human
 chimeric antibody (M1E07 H chain)

<400> 12
 Met Gly Trp Asn Trp Ile Phe Ile Leu Ile Leu Ser Val Thr Thr Gly
 1 5 10 15
 Val His Ser Glu Val Gln Leu Gln Gln Ser Gly Pro Glu Leu Val Lys
 20 25 30
 Pro Gly Ala Ser Val Lys Ile Ser Cys Lys Ala Ser Gly Tyr Ser Phe
 35 40 45
 Thr Gly Tyr Tyr Met His Trp Val Lys Gln Ser Pro Glu Lys Ser Leu
 50 55 60
 Glu Trp Ile Gly Glu Ile Asn Pro Ser Thr Gly Gly Thr Thr Tyr Asn
 65 70 75 80
 Gln Lys Phe Lys Ala Lys Ala Thr Leu Thr Val Asp Lys Ser Ser Ser
 85 90 95
 Thr Ala Tyr Met Gln Leu Lys Ser Leu Thr Ser Glu Asp Ser Ala Val
 100 105 110
 Tyr Tyr Cys Ala Arg Arg Gly Gly Leu Thr Gly Thr Ser Phe Phe Ala
 115 120 125
 Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ala Ala Ser Thr Lys
 130 135 140
 Gly Pro Ser Val Phe Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly
 145 150 155 160
 Gly Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro
 165 170 175
 Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr
 180 185 190
 Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val
 195 200 205
 Val Thr Val Pro Ser Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn
 210 215 220
 Val Asn His Lys Pro Ser Asn Thr Lys Val Asp Lys Lys Val Glu Pro
 225 230 235 240
 Lys Ser Cys Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu
 245 250 255
 Leu Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp
 260 265 270
 Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp
 275 280 285
 Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly
 290 295 300
 Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn
 305 310 315 320
 Ser Thr Tyr Arg Val Ser Val Leu Thr Val Leu His Gln Asp Trp
 325 330 335
 Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro
 340 345 350
 Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu
 355 360 365
 Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn
 370 375 380
 Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile
 385 390 395 400
 Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr
 405 410 415
 Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys
 420 425 430

Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys
 435 440 445
 Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu
 450 455 460
 Ser Leu Ser Pro Gly Lys
 465 470

<210> 13
 <211> 1416
 <212> DNA
 <213> Artificial Sequence

<220>
 <221> CDS
 <222> (1)..(1413)

<220>
 <223> Description of Artificial Sequence: Mouse-human
 chimeric antibody (M19B11 H chain)

<400> 13
 atg aac ttc ggg ctc acc ttg att ttc ctc gtc ctt act tta aaa ggt 48
 Met Asn Phe Gly Leu Thr Leu Ile Phe Leu Val Leu Thr Leu Lys Gly
 1 5 10 15
 gtc cag tgt gag gtg cag ctg gtg gag tct ggg gga gac tta gtg aag 96
 Val Gln Cys Glu Val Gln Leu Val Glu Ser Gly Gly Asp Leu Val Lys
 20 25 30
 cct gga ggg acc ctg aaa ctc tcc tgt gca gcc tct gga tcc act ttc 144
 Pro Gly Gly Thr Leu Lys Leu Ser Cys Ala Ala Ser Gly Ser Thr Phe
 35 40 45
 agt aac tat gcc atg tct tgg gtt cgc cag act cca gag aag agg ctg 192
 Ser Asn Tyr Ala Met Ser Trp Val Arg Gln Thr Pro Glu Lys Arg Leu
 50 55 60
 gag tgg gtc gca gcc att gat agt aat gga ggt acc acc tac tat cca 240
 Glu Trp Val Ala Ala Ile Asp Ser Asn Gly Gly Thr Thr Tyr Tyr Pro
 65 70 75 80
 gac act atg aag gac cga ttc acc att tcc aga gac aat gcc aag aac 288
 Asp Thr Met Lys Asp Arg Phe Thr Ile Ser Arg Asp Asn Ala Lys Asn
 85 90 95
 acc ctg tac ctg caa atg aac agt ctg agg tct gaa gac aca gcc ttt 336
 Thr Leu Tyr Leu Gln Met Asn Ser Leu Arg Ser Glu Asp Thr Ala Phe
 100 105 110
 tat cac tgt aca aga cat aat gga ggg tat gaa aac tac ggc tgg ttt 384
 Tyr His Cys Thr Arg His Asn Gly Gly Tyr Glu Asn Tyr Gly Trp Phe
 115 120 125
 gct tac tgg ggc caa ggg act ctg gtc act gtc tct gca gct agc acc 432
 Ala Tyr Trp Gly Gln Gly Thr Leu Val Thr Val Ser Ala Ala Ser Thr
 130 135 140
 aag ggc cca tcg gtc ttc ccc ctg gca ccc tcc tcc aag agc acc tct 480
 Lys Gly Pro Ser Val Phe Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser
 145 150 155 160
 ggg ggc aca gcg gcc ctg ggc tgc ctg gtc aag gac tac ttc ccc gaa 528
 Gly Gly Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu
 165 170 175
 ccg gtg acg gtg tcg tgg aac tca ggc gcc ctg acc agc ggc gtg cac 576
 Pro Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His
 180 185 190
 acc ttc ccg gct gtc cta cag tcc tca gga ctc tac tcc ctc agc agc 624
 Thr Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser
 195 200 205
 gtg gtg acc gtg ccc tcc agc agc ttg ggc acc cag acc tac atc tgc 672
 Val Val Thr Val Pro Ser Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys
 210 215 220
 aac gtg aat cac aag ccc agc aac acc aag gtg gac aag aaa gtt gag 720

Asn	Val	Asn	His	Lys	Pro	Ser	Asn	Thr	Lys	Val	Asp	Lys	Lys	Val	Glu	
225					230					235					240	
ccc	aaa	tct	tgt	gac	aaa	act	cac	aca	tgc	cca	ccg	tgc	cca	gca	cct	768
Pro	Lys	Ser	Cys	Asp	Lys	Thr	His	Thr	Cys	Pro	Pro	Cys	Pro	Ala	Pro	
				245					250					255		
gaa	ctc	ctg	ggg	gga	ccg	tca	gtc	ttc	ctc	ttc	ccc	cca	aaa	ccc	aag	816
Glu	Leu	Leu	Gly	Gly	Pro	Ser	Val	Phe	Leu	Phe	Pro	Pro	Lys	Pro	Lys	
			260					265					270			
gac	acc	ctc	atg	atc	tcc	cgg	acc	cct	gag	gtc	aca	tgc	gtg	gtg	gtg	864
Asp	Thr	Leu	Met	Ile	Ser	Arg	Thr	Pro	Glu	Val	Thr	Cys	Val	Val	Val	
		275					280					285				
gac	gtg	agc	cac	gaa	gac	cct	gag	gtc	aag	ttc	aac	tgg	tac	gtg	gac	912
Asp	Val	Ser	His	Glu	Asp	Pro	Glu	Val	Lys	Phe	Asn	Trp	Tyr	Val	Asp	
	290					295				300						
ggc	gtg	gag	gtg	cat	aat	gcc	aag	aca	aag	ccg	cgg	gag	gag	cag	tac	960
Gly	Val	Glu	Val	His	Asn	Ala	Lys	Thr	Lys	Pro	Arg	Glu	Glu	Gln	Tyr	
305				310					315					320		
aac	agc	acg	tac	cgt	gtg	gtc	agc	gtc	ctc	acc	gtc	ctg	cac	cag	gac	1008
Asn	Ser	Thr	Tyr	Arg	Val	Val	Ser	Val	Leu	Thr	Val	Leu	His	Gln	Asp	
				325				330						335		
tgg	ctg	aat	ggc	aag	gag	tac	aag	tgc	aag	gtc	tcc	aac	aaa	gcc	ctc	1056
Trp	Leu	Asn	Gly	Lys	Glu	Tyr	Lys	Cys	Lys	Val	Ser	Asn	Lys	Ala	Leu	
			340					345				350				
cca	gcc	ccc	atc	gag	aaa	acc	atc	tcc	aaa	gcc	aaa	ggg	cag	ccc	cga	1104
Pro	Ala	Pro	Ile	Glu	Lys	Thr	Ile	Ser	Lys	Ala	Lys	Gly	Gln	Pro	Arg	
	355					360				365						
gaa	cca	cag	gtg	tac	acc	ctg	ccc	cca	tcc	cgg	gat	gag	ctg	acc	aag	1152
Glu	Pro	Gln	Val	Tyr	Thr	Leu	Pro	Pro	Ser	Arg	Asp	Glu	Leu	Thr	Lys	
	370					375				380						
aac	cag	gtc	agc	ctg	acc	tgc	ctg	gtc	aaa	ggc	ttc	tat	ccc	agc	gac	1200
Asn	Gln	Val	Ser	Leu	Thr	Cys	Leu	Val	Lys	Gly	Phe	Tyr	Pro	Ser	Asp	
385				390				395						400		
atc	gcc	gtg	gag	tgg	gag	agc	aat	ggg	cag	ccg	gag	aac	aac	tac	aag	1248
Ile	Ala	Val	Glu	Trp	Glu	Ser	Asn	Gly	Gln	Pro	Glu	Asn	Asn	Tyr	Lys	
			405					410					415			
acc	acg	cct	ccc	gtg	ctg	gac	tcc	gac	ggc	tcc	ttc	ttc	ctc	tac	agc	1296
Thr	Thr	Pro	Pro	Val	Leu	Asp	Ser	Asp	Gly	Ser	Phe	Phe	Leu	Tyr	Ser	
		420				425					430					
aag	ctc	acc	gtg	gac	aag	agc	agg	tgg	cag	cag	ggg	aac	gtc	ttc	tca	1344
Lys	Leu	Thr	Val	Asp	Lys	Ser	Arg	Trp	Gln	Gln	Gly	Asn	Val	Phe	Ser	
		435				440					445					
tgc	tcc	gtg	atg	cat	gag	gct	ctg	cac	aac	cac	tac	acg	cag	aag	agc	1392
Cys	Ser	Val	Met	His	Glu	Ala	Leu	His	Asn	His	Tyr	Thr	Gln	Lys	Ser	
	450				455						460					
ctc	tcc	ctg	tct	ccg	ggt	aaa	tga									1416
Leu	Ser	Leu	Ser	Pro	Gly	Lys										
465					470											

<210> 14

<211> 471

<212> PRT

<213> Artificial Sequence

<223> Description of Artificial Sequence: Mouse-human
chimeric antibody (M19B11 H chain)

<400> 14

Met	Asn	Phe	Gly	Leu	Thr	Leu	Ile	Phe	Leu	Val	Leu	Thr	Leu	Lys	Gly	
1				5				10						15		
Val	Gln	Cys	Glu	Val	Gln	Leu	Val	Glu	Ser	Gly	Gly	Asp	Leu	Val	Lys	
		20						25				30				
Pro	Gly	Gly	Thr	Leu	Lys	Leu	Ser	Cys	Ala	Ala	Ser	Gly	Ser	Thr	Phe	
	35					40					45					
Ser	Asn	Tyr	Ala	Met	Ser	Trp	Val	Arg	Gln	Thr	Pro	Glu	Lys	Arg	Leu	

50						55						60					
Glu	Trp	Val	Ala	Ala	Ile	Asp	Ser	Asn	Gly	Gly	Thr	Thr	Tyr	Tyr	Pro		
65					70					75					80		
Asp	Thr	Met	Lys	Asp	Arg	Phe	Thr	Ile	Ser	Arg	Asp	Asn	Ala	Lys	Asn		
				85					90					95			
Thr	Leu	Tyr	Leu	Gln	Met	Asn	Ser	Leu	Arg	Ser	Glu	Asp	Thr	Ala	Phe		
			100					105					110				
Tyr	His	Cys	Thr	Arg	His	Asn	Gly	Gly	Tyr	Glu	Asn	Tyr	Gly	Trp	Phe		
		115					120					125					
Ala	Tyr	Trp	Gly	Gln	Gly	Thr	Leu	Val	Thr	Val	Ser	Ala	Ala	Ser	Thr		
	130					135					140						
Lys	Gly	Pro	Ser	Val	Phe	Pro	Leu	Ala	Pro	Ser	Ser	Lys	Ser	Thr	Ser		
145					150					155					160		
Gly	Gly	Thr	Ala	Ala	Leu	Gly	Cys	Leu	Val	Lys	Asp	Tyr	Phe	Pro	Glu		
				165					170					175			
Pro	Val	Thr	Val	Ser	Trp	Asn	Ser	Gly	Ala	Leu	Thr	Ser	Gly	Val	His		
			180					185					190				
Thr	Phe	Pro	Ala	Val	Leu	Gln	Ser	Ser	Gly	Leu	Tyr	Ser	Leu	Ser	Ser		
		195					200					205					
Val	Val	Thr	Val	Pro	Ser	Ser	Ser	Leu	Gly	Thr	Gln	Thr	Tyr	Ile	Cys		
	210					215					220						
Asn	Val	Asn	His	Lys	Pro	Ser	Asn	Thr	Lys	Val	Asp	Lys	Lys	Val	Glu		
225					230					235					240		
Pro	Lys	Ser	Cys	Asp	Lys	Thr	His	Thr	Cys	Pro	Pro	Cys	Pro	Ala	Pro		
				245					250					255			
Glu	Leu	Leu	Gly	Gly	Pro	Ser	Val	Phe	Leu	Phe	Pro	Pro	Lys	Pro	Lys		
			260					265					270				
Asp	Thr	Leu	Met	Ile	Ser	Arg	Thr	Pro	Glu	Val	Thr	Cys	Val	Val	Val		
		275					280					285					
Asp	Val	Ser	His	Glu	Asp	Pro	Glu	Val	Lys	Phe	Asn	Trp	Tyr	Val	Asp		
	290					295					300						
Gly	Val	Glu	Val	His	Asn	Ala	Lys	Thr	Lys	Pro	Arg	Glu	Glu	Gln	Tyr		
305					310					315					320		
Asn	Ser	Thr	Tyr	Arg	Val	Val	Ser	Val	Leu	Thr	Val	Leu	His	Gln	Asp		
				325					330					335			
Trp	Leu	Asn	Gly	Lys	Glu	Tyr	Lys	Cys	Lys	Val	Ser	Asn	Lys	Ala	Leu		
			340					345					350				
Pro	Ala	Pro	Ile	Glu	Lys	Thr	Ile	Ser	Lys	Ala	Lys	Gly	Gln	Pro	Arg		
		355					360					365					
Glu	Pro	Gln	Val	Tyr	Thr	Leu	Pro	Pro	Ser	Arg	Asp	Glu	Leu	Thr	Lys		
	370					375					380						
Asn	Gln	Val	Ser	Leu	Thr	Cys	Leu	Val	Lys	Gly	Phe	Tyr	Pro	Ser	Asp		
385					390					395					400		
Ile	Ala	Val	Glu	Trp	Glu	Ser	Asn	Gly	Gln	Pro	Glu	Asn	Asn	Tyr	Lys		
				405					410					415			
Thr	Thr	Pro	Pro	Val	Leu	Asp	Ser	Asp	Gly	Ser	Phe	Phe	Leu	Tyr	Ser		
			420					425					430				
Lys	Leu	Thr	Val	Asp	Lys	Ser	Arg	Trp	Gln	Gln	Gly	Asn	Val	Phe	Ser		
		435					440					445					
Cys	Ser	Val	Met	His	Glu	Ala	Leu	His	Asn	His	Tyr	Thr	Gln	Lys	Ser		
	450					455					460						
Leu	Ser	Leu	Ser	Pro	Gly	Lys											
465					470												

<210> 15
 <211> 1413
 <212> DNA
 <213> Artificial Sequence

<220>
 <221> CDS
 <222> (1)..(1410)

<220>

<223> Description of Artificial Sequence: Mouse-human
chimeric antibody (M18D04 H chain)

<400> 15

atg gaa tct aac tgg ata ctt cct ttt att ctg tcg gta gct tca ggg	48
Met Glu Ser Asn Trp Ile Leu Pro Phe Ile Leu Ser Val Ala Ser Gly	
1 5 10 15	
gtc tac tca gag gtt cag ctc cag cag tct ggg act gtg ctg gca agg	96
Val Tyr Ser Glu Val Gln Leu Gln Gln Ser Gly Thr Val Leu Ala Arg	
20 25 30	
cct ggg gct tca gtg aag atg tcc tgc aag gct tct ggc tac acc ttt	144
Pro Gly Ala Ser Val Lys Met Ser Cys Lys Ala Ser Gly Tyr Thr Phe	
35 40 45	
act ggc tac tgg atg cgc tgg gta aaa cag agg cct gga cag ggt ctg	192
Thr Gly Tyr Trp Met Arg Trp Val Lys Gln Arg Pro Gly Gln Gly Leu	
50 55 60	
gaa tgg att ggc gct att tat cct gga aat agt gat aca aca tac aac	240
Glu Trp Ile Gly Ala Ile Tyr Pro Gly Asn Ser Asp Thr Thr Tyr Asn	
65 70 75 80	
cag aag ttc aag ggc aag gcc aaa ctg act gca gtc aca tct gtc agc	288
Gln Lys Phe Lys Gly Lys Ala Lys Leu Thr Ala Val Thr Ser Val Ser	
85 90 95	
act gcc tac atg gaa ctc agc agc ctg aca aat gag gac tct gcg gtc	336
Thr Ala Tyr Met Glu Leu Ser Ser Leu Thr Asn Glu Asp Ser Ala Val	
100 105 110	
tat tac tgt tca aga tcg ggg gac cta act ggg ggg ttt gct tac tgg	384
Tyr Tyr Cys Ser Arg Ser Gly Asp Leu Thr Gly Gly Phe Ala Tyr Trp	
115 120 125	
ggc caa ggg act ctg gtc act gtc tct aca gcc aaa gct agc acc aag	432
Gly Gln Gly Thr Leu Val Thr Val Ser Thr Ala Lys Ala Ser Thr Lys	
130 135 140	
ggc cca tcg gtc ttc ccc ctg gca ccc tcc tcc aag agc acc tct ggg	480
Gly Pro Ser Val Phe Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly	
145 150 155 160	
ggc aca gcg gcc ctg ggc tgc ctg gtc aag gac tac ttc ccc gaa ccg	528
Gly Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro	
165 170 175	
gtg acg gtg tcg tgg aac tca ggc gcc ctg acc agc ggc gtg cac acc	576
Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr	
180 185 190	
ttc ccg gct gtc cta cag tcc tca gga ctc tac tcc ctc agc agc gtg	624
Phe Pro Ala Val Leu Gln Ser Ser Gly Leu Tyr Ser Leu Ser Ser Val	
195 200 205	
gtg acc gtg ccc tcc agc agc ttg ggc acc cag acc tac atc tgc aac	672
Val Thr Val Pro Ser Ser Ser Leu Gly Thr Gln Thr Tyr Ile Cys Asn	
210 215 220	
gtg aat cac aag ccc agc aac acc aag gtg gac aag aaa gtt gag ccc	720
Val Asn His Lys Pro Ser Asn Thr Lys Val Asp Lys Lys Val Glu Pro	
225 230 235 240	
aaa tct tgt gac aaa act cac aca tgc cca ccg tgc cca gca cct gaa	768
Lys Ser Cys Asp Lys Thr His Thr Cys Pro Pro Cys Pro Ala Pro Glu	
245 250 255	
ctc ctg ggg gga ccg tca gtc ttc ctc ttc ccc cca aaa ccc aag gac	816
Leu Leu Gly Gly Pro Ser Val Phe Leu Phe Pro Pro Lys Pro Lys Asp	
260 265 270	
acc ctc atg atc tcc cgg acc cct gag gtc aca tgc gtg gtg gtg gac	864
Thr Leu Met Ile Ser Arg Thr Pro Glu Val Thr Cys Val Val Val Asp	
275 280 285	
gtg agc cac gaa gac cct gag gtc aag ttc aac tgg tac gtg gac ggc	912
Val Ser His Glu Asp Pro Glu Val Lys Phe Asn Trp Tyr Val Asp Gly	
290 295 300 305	
gtg gag gtg cat aat gcc aag aca aag ccg ccg gag gag cag tac aac	960
Val Glu Val His Asn Ala Lys Thr Lys Pro Arg Glu Glu Gln Tyr Asn	
310 315 320	

agc acg tac cgt gtg gtc agc gtc ctc acc gtc ctg cac cag gac tgg	1008
Ser Thr Tyr Arg Val Val Ser Val Leu Thr Val Leu His Gln Asp Trp	
325 330 335	
ctg aat ggc aag gag tac aag tgc aag gtc tcc aac aaa gcc ctc cca	1056
Leu Asn Gly Lys Glu Tyr Lys Cys Lys Val Ser Asn Lys Ala Leu Pro	
340 345 350	
gcc ccc atc gag aaa acc atc tcc aaa gcc aaa ggg cag ccc cga gaa	1104
Ala Pro Ile Glu Lys Thr Ile Ser Lys Ala Lys Gly Gln Pro Arg Glu	
355 360 365	
cca cag gtg tac acc ctg ccc cca tcc cgg gat gag ctg acc aag aac	1152
Pro Gln Val Tyr Thr Leu Pro Pro Ser Arg Asp Glu Leu Thr Lys Asn	
370 375 380	
cag gtc agc ctg acc tgc ctg gtc aaa ggc ttc tat ccc agc gac atc	1200
Gln Val Ser Leu Thr Cys Leu Val Lys Gly Phe Tyr Pro Ser Asp Ile	
385 390 395 400	
gcc gtg gag tgg gag agc aat ggg cag ccg gag aac aac tac aag acc	1248
Ala Val Glu Trp Glu Ser Asn Gly Gln Pro Glu Asn Asn Tyr Lys Thr	
405 410 415	
acg cct ccc gtg ctg gac tcc gac ggc tcc ttc ttc ctc tac agc aag	1296
Thr Pro Pro Val Leu Asp Ser Asp Gly Ser Phe Phe Leu Tyr Ser Lys	
420 425 430	
ctc acc gtg gac aag agc agg tgg cag ggc aac gtc ttc tca tgc	1344
Leu Thr Val Asp Lys Ser Arg Trp Gln Gln Gly Asn Val Phe Ser Cys	
435 440 445	
tcc gtg atg cat gag gct ctg cac aac cac tac acg cag aag agc ctc	1392
Ser Val Met His Glu Ala Leu His Asn His Tyr Thr Gln Lys Ser Leu	
450 455 460	
tcc ctg tct ccg ggt aaa tga	1413
Ser Leu Ser Pro Gly Lys	
465 470	

<210> 16

<211> 470

<212> PRT

<213> Artificial Sequence

<223> Description of Artificial Sequence: Mouse-human
chimeric antibody (M18D04 H chain)

<400> 16

Met Glu Ser Asn Trp Ile Leu Pro Phe Ile Leu Ser Val Ala Ser Gly	
1 5 10 15	
Val Tyr Ser Glu Val Gln Leu Gln Gln Ser Gly Thr Val Leu Ala Arg	
20 25 30	
Pro Gly Ala Ser Val Lys Met Ser Cys Lys Ala Ser Gly Tyr Thr Phe	
35 40 45	
Thr Gly Tyr Trp Met Arg Trp Val Lys Gln Arg Pro Gly Gln Gly Leu	
50 55 60	
Glu Trp Ile Gly Ala Ile Tyr Pro Gly Asn Ser Asp Thr Thr Tyr Asn	
65 70 75 80	
Gln Lys Phe Lys Gly Lys Ala Lys Leu Thr Ala Val Thr Ser Val Ser	
85 90 95	
Thr Ala Tyr Met Glu Leu Ser Ser Leu Thr Asn Glu Asp Ser Ala Val	
100 105 110	
Tyr Tyr Cys Ser Arg Ser Gly Asp Leu Thr Gly Gly Phe Ala Tyr Trp	
115 120 125	
Gly Gln Gly Thr Leu Val Thr Val Ser Thr Ala Lys Ala Ser Thr Lys	
130 135 140	
Gly Pro Ser Val Phe Pro Leu Ala Pro Ser Ser Lys Ser Thr Ser Gly	
145 150 155 160	
Gly Thr Ala Ala Leu Gly Cys Leu Val Lys Asp Tyr Phe Pro Glu Pro	
165 170 175	
Val Thr Val Ser Trp Asn Ser Gly Ala Leu Thr Ser Gly Val His Thr	
180 185 190	

Phe	Pro	Ala	Val	Leu	Gln	Ser	Ser	Gly	Leu	Tyr	Ser	Leu	Ser	Ser	Val
		195					200					205			
Val	Thr	Val	Pro	Ser	Ser	Ser	Leu	Gly	Thr	Gln	Thr	Tyr	Ile	Cys	Asn
	210					215					220				
Val	Asn	His	Lys	Pro	Ser	Asn	Thr	Lys	Val	Asp	Lys	Lys	Val	Glu	Pro
225					230					235					240
Lys	Ser	Cys	Asp	Lys	Thr	His	Thr	Cys	Pro	Pro	Cys	Pro	Ala	Pro	Glu
				245					250					255	
Leu	Leu	Gly	Gly	Pro	Ser	Val	Phe	Leu	Phe	Pro	Pro	Lys	Pro	Lys	Asp
			260					265					270		
Thr	Leu	Met	Ile	Ser	Arg	Thr	Pro	Glu	Val	Thr	Cys	Val	Val	Val	Asp
		275					280					285			
Val	Ser	His	Glu	Asp	Pro	Glu	Val	Lys	Phe	Asn	Trp	Tyr	Val	Asp	Gly
	290					295					300				
Val	Glu	Val	His	Asn	Ala	Lys	Thr	Lys	Pro	Arg	Glu	Glu	Gln	Tyr	Asn
305					310					315					320
Ser	Thr	Tyr	Arg	Val	Val	Ser	Val	Leu	Thr	Val	Leu	His	Gln	Asp	Trp
				325					330					335	
Leu	Asn	Gly	Lys	Glu	Tyr	Lys	Cys	Lys	Val	Ser	Asn	Lys	Ala	Leu	Pro
			340					345					350		
Ala	Pro	Ile	Glu	Lys	Thr	Ile	Ser	Lys	Ala	Lys	Gly	Gln	Pro	Arg	Glu
		355					360					365			
Pro	Gln	Val	Tyr	Thr	Leu	Pro	Pro	Ser	Arg	Asp	Glu	Leu	Thr	Lys	Asn
	370					375					380				
Gln	Val	Ser	Leu	Thr	Cys	Leu	Val	Lys	Gly	Phe	Tyr	Pro	Ser	Asp	Ile
385					390					395					400
Ala	Val	Glu	Trp	Glu	Ser	Asn	Gly	Gln	Pro	Glu	Asn	Asn	Tyr	Lys	Thr
				405					410					415	
Thr	Pro	Pro	Val	Leu	Asp	Ser	Asp	Gly	Ser	Phe	Phe	Leu	Tyr	Ser	Lys
			420					425					430		
Leu	Thr	Val	Asp	Lys	Ser	Arg	Trp	Gln	Gln	Gly	Asn	Val	Phe	Ser	Cys
		435					440					445			
Ser	Val	Met	His	Glu	Ala	Leu	His	Asn	His	Tyr	Thr	Gln	Lys	Ser	Leu
	450					455					460				
Ser	Leu	Ser	Pro	Gly	Lys										
465					470										

<210> 17

<211> 717

<212> DNA

<213> Artificial Sequence

<220>

<221> CDS

<222> (1)..(714)

<220>

<223> Description of Artificial Sequence: Mouse-human
chimeric antibody (M3C11 L chain)

<400> 17

atg	agt	cct	gcc	cag	ttc	ctg	ttt	ctg	tta	gtg	ctc	tgg	att	cgg	gaa	48
Met	Ser	Pro	Ala	Gln	Phe	Leu	Phe	Leu	Leu	Val	Leu	Trp	Ile	Arg	Glu	
1				5				10				15				
acc	aac	ggt	gat	gtt	gtg	atg	acc	cag	act	cca	ctc	act	ttg	tcg	gtt	96
Thr	Asn	Gly	Asp	Val	Val	Met	Thr	Gln	Thr	Pro	Leu	Thr	Leu	Ser	Val	
				20				25				30				
acc	att	gga	caa	cca	gcc	tcc	atc	tct	tgc	aag	tca	agt	cag	agc	ctc	144
Thr	Ile	Gly	Gln	Pro	Ala	Ser	Ile	Ser	Cys	Lys	Ser	Ser	Gln	Ser	Leu	
		35				40					45					
tta	gat	agt	gat	gga	aag	aca	tat	ttg	aat	tgg	ttg	tta	cag	agg	cca	192
Leu	Asp	Ser	Asp	Gly	Lys	Thr	Tyr	Leu	Asn	Trp	Leu	Leu	Gln	Arg	Pro	
	50					55				60						
ggc	cag	tct	cca	aag	cgc	cta	atc	tat	ctg	gtg	tct	aaa	ttg	gac	tct	240

Gly 65	Gln	Ser	Pro	Lys	Arg 70	Leu	Ile	Tyr	Leu	Val 75	Ser	Lys	Leu	Asp	Ser 80	
gga	gcc	cct	gac	agg	ttc	act	ggc	agt	gga	tca	ggg	aca	gat	ttc	aca	288
Gly	Ala	Pro	Asp	Arg 85	Phe	Thr	Gly	Ser	Gly 90	Ser	Gly	Thr	Asp	Phe	Thr	
ctg	aaa	atc	agt	aga	gtg	gag	gct	gag	gat	ttg	gga	att	tat	tat	tgc	336
Leu	Lys	Ile	Ser	Arg	Val	Glu	Ala	Glu	Asp	Leu	Gly	Ile	Tyr	Tyr	Cys	
tgg	caa	ggg	aca	cat	ttt	ccg	ctc	acg	ttc	ggg	gct	ggg	acc	aag	ctg	384
Trp	Gln	Gly 115	Thr	His	Phe	Pro	Leu 120	Thr	Phe	Gly	Ala	Gly 125	Thr	Lys	Leu	
gag	ctg	aaa	cgt	acg	gtg	gct	gca	cca	tct	gtc	ttc	atc	ttc	ccg	cca	432
Glu	Leu	Lys	Arg	Thr	Val	Ala	Ala	Pro	Ser	Val	Phe	Ile	Phe	Pro	Pro	
tct	gat	gag	cag	ttg	aaa	tct	gga	act	gcc	tct	ggt	gtg	tgc	ctg	ctg	480
Ser	Asp	Glu	Gln	Leu	Lys 150	Ser	Gly	Thr	Ala	Ser	Val	Val	Cys	Leu	Leu 160	
aat	aac	ttc	tat	ccc	aga	gag	gcc	aaa	gta	cag	tgg	aag	gtg	gat	aac	528
Asn	Asn	Phe	Tyr	Pro	Arg	Glu	Ala	Lys	Val 170	Gln	Trp	Lys	Val	Asp	Asn	
gcc	ctc	caa	tcg	ggg	aac	tcc	cag	gag	agt	gtc	aca	gag	cag	gac	agc	576
Ala	Leu	Gln	Ser	Gly 180	Asn	Ser	Gln	Glu	Ser	Val	Thr	Glu	Gln	Asp	Ser	
aag	gac	agc	acc	tac	agc	ctc	agc	agc	acc	ctg	acg	ctg	agc	aaa	gca	624
Lys	Asp	Ser	Thr	Tyr	Ser	Leu	Ser	Ser	Thr	Leu	Thr	Leu	Ser	Lys	Ala	
gac	tac	gag	aaa	cac	aaa	gtc	tac	gcc	tgc	gaa	gtc	acc	cat	cag	ggc	672
Asp	Tyr	Glu	Lys	His	Lys	Val	Tyr	Ala	Cys	Glu	Val	Thr	His	Gln	Gly	
ctg	agc	tcg	ccc	gtc	aca	aag	agc	ttc	aac	agg	gga	gag	tgt	tga		717
Leu	Ser	Ser	Pro	Val	Thr 230	Lys	Ser	Phe	Asn	Arg 235	Gly	Glu	Cys			

<210> 18

<211> 238

<212> PRT

<213> Artificial sequence

<223> Description of Artificial Sequence: Mouse-human
chimeric antibody (M3C11 L chain)

<400> 18

Met 1	Ser	Pro	Ala	Gln 5	Phe	Leu	Phe	Leu	Leu 10	Val	Leu	Trp	Ile	Arg	Glu	
Thr	Asn	Gly	Asp 20	Val	Val	Met	Thr	Gln 25	Thr	Pro	Leu	Thr	Leu	Ser	Val	
Thr	Ile	Gly	Gln 35	Pro	Ala	Ser	Ile	Ser	Cys	Lys	Ser	Ser	Gln	Ser	Leu	
Leu	Asp	Ser	Asp 50	Gly	Lys	Thr	Tyr	Leu	Asn	Trp	Leu	Leu	Gln	Arg	Pro	
Gly	Gln	Ser	Pro	Lys	Arg 70	Leu	Ile	Tyr	Leu	Val	Ser	Lys	Leu	Asp	Ser	
Gly	Ala	Pro	Asp	Arg 85	Phe	Thr	Gly	Ser	Gly 90	Ser	Gly	Thr	Asp	Phe	Thr	
Leu	Lys	Ile	Ser	Arg	Val	Glu	Ala	Glu	Asp	Leu	Gly	Ile	Tyr	Tyr	Cys	
Trp	Gln	Gly	Thr	His	Phe	Pro	Leu	Thr	Phe	Gly	Ala	Gly	Thr	Lys	Leu	
Glu	Leu	Lys	Arg	Thr	Val	Ala	Ala	Pro	Ser	Val	Phe	Ile	Phe	Pro	Pro	
Ser	Asp	Glu	Gln	Leu	Lys 150	Ser	Gly	Thr	Ala	Ser	Val	Val	Cys	Leu	Leu	
Asn	Asn	Phe	Tyr	Pro	Arg	Glu	Ala	Lys	Val	Gln	Trp	Lys	Val	Asp	Asn	

Ala Leu Gln Ser Gly Asn Ser Gln Glu Ser Val Thr Glu Gln Asp Ser
 180 185 190
 Lys Asp Ser Thr Tyr Ser Leu Ser Thr Leu Thr Leu Ser Lys Ala
 195 200 205
 Asp Tyr Glu Lys His Lys Val Tyr Ala Cys Glu Val Thr His Gln Gly
 210 215 220
 Leu Ser Ser Pro Val Thr Lys Ser Phe Asn Arg Gly Glu Cys
 225 230 235

<210> 19
 <211> 717
 <212> DNA
 <213> Artificial Sequence

<220>
 <221> CDS
 <222> (1)..(714)

<220>
 <223> Description of Artificial Sequence: Mouse-human
 chimeric antibody (M1E07 L chain)

<400> 19
 atg agt cct gtc cag ttc ctg ttt ctg tta atg ctc tgg att cag gaa 48
 Met Ser Pro Val Gln Phe Leu Phe Leu Leu Met Leu Trp Ile Gln Glu
 1 5 10 15
 acc aac ggt gat gtt gtg atg acc cag act cca ctg tct ttg tcg gtt 96
 Thr Asn Gly Asp Val Val Met Thr Gln Thr Pro Leu Ser Leu Ser Val
 20 25 30
 acc att gga caa cca gcc tct atc tct tgc aag tca agt cag agc ctc 144
 Thr Ile Gly Gln Pro Ala Ser Ile Ser Cys Lys Ser Ser Gln Ser Leu
 35 40 45
 tta tat agt aat gga aag aca tat ttg aat tgg tta caa cag agg cct 192
 Leu Tyr Ser Asn Gly Lys Thr Tyr Leu Asn Trp Leu Gln Gln Arg Pro
 50 55 60
 ggc cag gct cca aag cac cta atg tat cag gtg tcc aaa ctg gac cct 240
 Gly Gln Ala Pro Lys His Leu Met Tyr Gln Val Ser Lys Leu Asp Pro
 65 70 75 80
 ggc atc cct gac agg ttc agt ggc agt gga tca gaa aca gat ttt aca 288
 Gly Ile Pro Asp Arg Phe Ser Gly Ser Gly Ser Glu Thr Asp Phe Thr
 85 90 95
 ctt aaa atc agc aga gtg gag gct gaa gat ttg gga gtt tat tac tgc 336
 Leu Lys Ile Ser Arg Val Glu Ala Glu Asp Leu Gly Val Tyr Tyr Cys
 100 105 110
 ttg caa agt aca tat tat ccg ctc acg ttc ggt gct ggg acc aag ctg 384
 Leu Gln Ser Thr Tyr Tyr Pro Leu Thr Phe Gly Ala Gly Thr Lys Leu
 115 120 125
 gag ctg aaa cgt acg gtg gct gca cca tct gtc ttc atc ttc ccg cca 432
 Glu Leu Lys Arg Thr Val Ala Ala Pro Ser Val Phe Ile Phe Pro Pro
 130 135 140
 tct gat gag cag ttg aaa tct gga act gcc tct gtt gtg tgc ctg ctg 480
 Ser Asp Glu Gln Leu Lys Ser Gly Thr Ala Ser Val Val Cys Leu Leu
 145 150 155 160
 aat aac ttc tat ccc aga gag gcc aaa gta cag tgg aag gtg gat aac 528
 Asn Asn Phe Tyr Pro Arg Glu Ala Lys Val Gln Trp Lys Val Asp Asn
 165 170 175
 gcc ctc caa tcg ggt aac tcc cag gag agt gtc aca gag cag gac agc 576
 Ala Leu Gln Ser Gly Asn Ser Gln Glu Ser Val Thr Glu Gln Asp Ser
 180 185 190
 aag gac agc acc tac agc ctc agc agc acc ctg acg ctg agc aaa gca 624
 Lys Asp Ser Thr Tyr Ser Leu Ser Ser Thr Leu Thr Leu Ser Lys Ala
 195 200 205
 gac tac gag aaa cac aaa gtc tac gcc tgc gaa gtc acc cat cag ggc 672
 Asp Tyr Glu Lys His Lys Val Tyr Ala Cys Glu Val Thr His Gln Gly

210 215 220
 ctg agc tcg ccc gtc aca aag agc ttc aac agg gga gag tgt tga 717
 Leu Ser Ser Pro Val Thr Lys Ser Phe Asn Arg Gly Glu Cys
 225 230 235

<210> 20
 <211> 238
 <212> PRT
 <213> Artificial Sequence

<223> Description of Artificial Sequence: Mouse-human
 chimeric antibody (M1E07 L chain)

<400> 20
 Met Ser Pro Val Gln Phe Leu Phe Leu Leu Met Leu Trp Ile Gln Glu
 1 5 10 15
 Thr Asn Gly Asp Val Val Met Thr Gln Thr Pro Leu Ser Leu Ser Val
 20 25 30
 Thr Ile Gly Gln Pro Ala Ser Ile Ser Cys Lys Ser Ser Gln Ser Leu
 35 40 45
 Leu Tyr Ser Asn Gly Lys Thr Tyr Leu Asn Trp Leu Gln Gln Arg Pro
 50 55 60
 Gly Gln Ala Pro Lys His Leu Met Tyr Gln Val Ser Lys Leu Asp Pro
 65 70 75 80
 Gly Ile Pro Asp Arg Phe Ser Gly Ser Gly Ser Glu Thr Asp Phe Thr
 85 90 95
 Leu Lys Ile Ser Arg Val Glu Ala Glu Asp Leu Gly Val Tyr Tyr Cys
 100 105 110
 Leu Gln Ser Thr Tyr Tyr Pro Leu Thr Phe Gly Ala Gly Thr Lys Leu
 115 120 125
 Glu Leu Lys Arg Thr Val Ala Ala Pro Ser Val Phe Ile Phe Pro Pro
 130 135 140
 Ser Asp Glu Gln Leu Lys Ser Gly Thr Ala Ser Val Val Cys Leu Leu
 145 150 155 160
 Asn Asn Phe Tyr Pro Arg Glu Ala Lys Val Gln Trp Lys Val Asp Asn
 165 170 175
 Ala Leu Gln Ser Gly Asn Ser Gln Glu Ser Val Thr Glu Gln Asp Ser
 180 185 190
 Lys Asp Ser Thr Tyr Ser Leu Ser Ser Thr Leu Thr Leu Ser Lys Ala
 195 200 205
 Asp Tyr Glu Lys His Lys Val Tyr Ala Cys Glu Val Thr His Gln Gly
 210 215 220
 Leu Ser Ser Pro Val Thr Lys Ser Phe Asn Arg Gly Glu Cys
 225 230 235

<210> 21
 <211> 705
 <212> DNA
 <213> Artificial Sequence

<220>
 <221> CDS
 <222> (1)..(702)

<220>
 <223> Description of Artificial Sequence: Mouse-human
 chimeric antibody (M19B11 L chain)

<400> 21
 atg aga ccc tcc att cag ttc ctg ggg ctc ttg ttg ttc tgg ctt cat 48
 Met Arg Pro Ser Ile Gln Phe Leu Gly Leu Leu Leu Phe Trp Leu His
 1 5 10 15
 ggt gtt cag tgt gac atc cag atg aca cag tct cca tcc tca ctg tct 96
 Gly Val Gln Cys Asp Ile Gln Met Thr Gln Ser Pro Ser Ser Leu Ser

Asn	Leu	Pro	Arg	Thr	Phe	Gly	Gly	Gly	Thr	Lys	Leu	Glu	Ile	Lys	Arg
		115					120					125			
Thr	Val	Ala	Ala	Pro	Ser	Val	Phe	Ile	Phe	Pro	Pro	Ser	Asp	Glu	Gln
	130					135					140				
Leu	Lys	Ser	Gly	Thr	Ala	Ser	Val	Val	Cys	Leu	Leu	Asn	Asn	Phe	Tyr
145					150					155					160
Pro	Arg	Glu	Ala	Lys	Val	Gln	Trp	Lys	Val	Asp	Asn	Ala	Leu	Gln	Ser
				165					170					175	
Gly	Asn	Ser	Gln	Glu	Ser	Val	Thr	Glu	Gln	Asp	Ser	Lys	Asp	Ser	Thr
			180					185					190		
Tyr	Ser	Leu	Ser	Ser	Thr	Leu	Thr	Leu	Ser	Lys	Ala	Asp	Tyr	Glu	Lys
		195					200					205			
His	Lys	Val	Tyr	Ala	Cys	Glu	Val	Thr	His	Gln	Gly	Leu	Ser	Ser	Pro
	210					215					220				
Val	Thr	Lys	Ser	Phe	Asn	Arg	Gly	Glu	Cys						
225					230										

<210> 23

<211> 720

<212> DNA

<213> Artificial Sequence

<220>

<221> CDS

<222> (1)..(717)

<220>

<223> Description of Artificial Sequence: Mouse-human
chimeric antibody (M18D04 L chain)

<400> 23

atg	agg	ttc	tct	gct	cag	ctt	ctg	ggg	ctg	ctt	gtg	ctc	tgg	atc	cct	48
Met	Arg	Phe	Ser	Ala	Gln	Leu	Leu	Gly	Leu	Leu	Val	Leu	Trp	Ile	Pro	
1				5					10					15		
gga	tcc	act	gca	gat	att	gtg	atg	acg	cag	gct	gca	ttc	tcc	aat	cca	96
Gly	Ser	Thr	Ala	Asp	Ile	Val	Met	Thr	Gln	Ala	Ala	Phe	Ser	Asn	Pro	
			20					25					30			
gtc	act	ctt	gga	aca	tca	act	tcc	atc	tcc	tgc	agg	tct	agt	aag	agt	144
Val	Thr	Leu	Gly	Thr	Ser	Thr	Ser	Ile	Ser	Cys	Arg	Ser	Ser	Lys	Ser	
			35				40					45				
ctc	cta	cat	agt	aat	ggc	atc	act	tat	ttg	tat	tgg	tat	ctg	cag	aag	192
Leu	Leu	His	Ser	Asn	Gly	Ile	Thr	Tyr	Leu	Tyr	Trp	Tyr	Leu	Gln	Lys	
		50				55					60					
cca	ggc	cag	tct	cct	cag	ctc	ctg	att	tat	cag	atg	tcc	aac	ctt	gcc	240
Pro	Gly	Gln	Ser	Pro	Gln	Leu	Leu	Ile	Tyr	Gln	Met	Ser	Asn	Leu	Ala	
	65				70				75					80		
tca	gga	gtc	cca	gac	agg	ttc	agt	agc	agt	ggg	tca	gga	act	gat	ttc	288
Ser	Gly	Val	Pro	Asp	Arg	Phe	Ser	Ser	Ser	Gly	Ser	Gly	Thr	Asp	Phe	
				85					90					95		
aca	ctg	aga	atc	agc	aga	gtg	gag	gct	gag	gat	gtg	ggt	ggt	tat	tac	336
Thr	Leu	Arg	Ile	Ser	Arg	Val	Glu	Ala	Glu	Asp	Val	Gly	Val	Tyr	Tyr	
			100					105					110			
tgt	gct	caa	aat	cta	gaa	ctt	ccg	tat	acg	ttc	gga	tcg	ggg	acc	aag	384
Cys	Ala	Gln	Asn	Leu	Glu	Leu	Pro	Tyr	Thr	Phe	Gly	Ser	Gly	Thr	Lys	
		115					120					125				
ctg	gaa	ata	aaa	cgt	acg	gtg	gct	gca	cca	tct	gtc	ttc	atc	ttc	ccg	432
Leu	Glu	Ile	Lys	Arg	Thr	Val	Ala	Ala	Pro	Ser	Val	Phe	Ile	Phe	Pro	
	130					135					140					
cca	tct	gat	gag	cag	ttg	aaa	tct	gga	act	gcc	tct	ggt	gtg	tgc	ctg	480
Pro	Ser	Asp	Glu	Gln	Leu	Lys	Ser	Gly	Thr	Ala	Ser	Val	Val	Cys	Leu	
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ctg	aat	aac	ttc	tat	ccc	aga	gag	gcc	aaa	gta	cag	tgg	aag	gtg	gat	528
Leu	Asn	Asn	Phe	Tyr	Pro	Arg	Glu	Ala	Lys	Val	Gln	Trp	Lys	Val	Asp	
				165					170					175		

aac gcc ctc caa tcg ggt aac tcc cag gag agt gtc aca gag cag gac	576
Asn Ala Leu Gln Ser Gly Asn Ser Gln Glu Ser Val Thr Glu Gln Asp	
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agc aag gac agc acc tac agc ctc agc acc ctg acg ctg agc aaa	624
Ser Lys Asp Ser Thr Tyr Ser Leu Ser Ser Thr Leu Thr Leu Ser Lys	
195	
200	
205	
gca gac tac gag aaa cac aaa gtc tac gcc tgc gaa gtc acc cat cag	672
Ala Asp Tyr Glu Lys His Lys Val Tyr Ala Cys Glu Val Thr His Gln	
210	
215	
220	
ggc ctg agc tcg ccc gtc aca aag agc ttc aac agg gga gag tgt tga	720
Gly Leu Ser Ser Pro Val Thr Lys Ser Phe Asn Arg Gly Glu Cys	
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230	
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<211> 239

<212> PRT

<213> Artificial Sequence

<223> Description of Artificial Sequence: Mouse-human
chimeric antibody (M18D04 L chain)

<400> 24

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Gly Ser Thr Ala Asp Ile Val Met Thr Gln Ala Ala Phe Ser Asn Pro	
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Val Thr Leu Gly Thr Ser Thr Ser Ile Ser Cys Arg Ser Ser Lys Ser	
35 40 45	
Leu Leu His Ser Asn Gly Ile Thr Tyr Leu Tyr Trp Tyr Leu Gln Lys	
50 55 60	
Pro Gly Gln Ser Pro Gln Leu Leu Ile Tyr Gln Met Ser Asn Leu Ala	
65 70 75 80	
Ser Gly Val Pro Asp Arg Phe Ser Ser Ser Gly Ser Gly Thr Asp Phe	
85 90 95	
Thr Leu Arg Ile Ser Arg Val Glu Ala Glu Asp Val Gly Val Tyr Tyr	
100 105 110	
Cys Ala Gln Asn Leu Glu Leu Pro Tyr Thr Phe Gly Ser Gly Thr Lys	
115 120 125	
Leu Glu Ile Lys Arg Thr Val Ala Ala Pro Ser Val Phe Ile Phe Pro	
130 135 140	
Pro Ser Asp Glu Gln Leu Lys Ser Gly Thr Ala Ser Val Val Cys Leu	
145 150 155 160	
Leu Asn Asn Phe Tyr Pro Arg Glu Ala Lys Val Gln Trp Lys Val Asp	
165 170 175	
Asn Ala Leu Gln Ser Gly Asn Ser Gln Glu Ser Val Thr Glu Gln Asp	
180 185 190	
Ser Lys Asp Ser Thr Tyr Ser Leu Ser Ser Thr Leu Thr Leu Ser Lys	
195 200 205	
Ala Asp Tyr Glu Lys His Lys Val Tyr Ala Cys Glu Val Thr His Gln	
210 215 220	
Gly Leu Ser Ser Pro Val Thr Lys Ser Phe Asn Arg Gly Glu Cys	
225 230 235	